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10/085,031	03/01/2002	Yang Wang	ASH-01-003	8822

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Technology Law Department
WORLDCOM, Inc.
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EXAMINER	
BOAKYE, ALEXANDER O	

ART UNIT	PAPER NUMBER
2667	

DATE MAILED: 01/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/085,031	WANG, YANG	
	Examiner	Art Unit	
	ALEXANDER BOAKYE	2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-24 and 27-29* is/are rejected.

7)☒ Claim(s) *3, 25 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Ayres (US Patent # 6,597,699).

Regarding claim 1, Ayres teaches a router system (110 of Fig. 7) comprising: a plurality of virtual routers (column 11, lines 29-30; 112, 114,116 and 118 correspond to the claimed virtual routers of router system 110 of Fig. 7); at least one resource shared by the plurality of virtual routers (column 10, lines 56-58); a resource allocator configured to control access to the at least one resource by the plurality of virtual routers (column 7, lines 52-63; column 8, lines 29-33; the claimed resource allocator corresponds to flow manager 54 of Fig. 3).

Regarding claim 2, Ayres teaches that one of the plurality of virtual routers is configured to operate functionally different than at least one other of the plurality of virtual routers (column 10, lines 30-35).

Regarding claim 4, Ayres teaches that the router system is a single high-capacity router (column 11, lines 11-16).

Regarding claim 5, Ayres teaches that each of the plurality of virtual routers is associated with a router profile that is configured to store one or more virtual router attributes (column 5, lines 66-67).

Regarding claim 6, Ayres teaches that more virtual routers attributes includes at least one of an identifier(the claimed identifier of virtual router attributes corresponds to destination address as evidenced by Ayres).

Regarding claim 7, Ayres teaches that more virtual router attributes includes resource sharing priority information for each of the at least one resource (column 10, lines 56-58).

Regarding claim 8, Ayres teaches that the resource allocator controls access to the at least one resource based on at least one of the one or more virtual router attributes (column 7, lines 52-63; column 8, lines 29-33; the claimed resource allocator corresponds to flow manager 54 of Fig. 3).

Regarding claim 9, Ayres teaches that at least one resource includes a routing process (column 3, lines 34-37).

Regarding claim 11, Ayres teaches that at least one resource includes a common memory (53, Fig. 3).

Regarding claim 12, Ayres teaches a resource-shared information base configured to maintain the at least one resource (column 10, lines 56-58).

Regarding claim 13, Ayres teaches that the resource-shared information base is further configured to store a plurality of attributes for each of the plurality of virtual routers (column 10, lines 56-58 ; column 5, line 66-column 6, lines 1-13).

Regarding claims 14 and 17, Ayres teaches that the plurality of attributes include at least two of : a virtual router identifier (the claimed virtual router identifier is inherent in the virtual router of Ayres), a bandwidth parameter for each interface with which a respective virtual router is associated (column 7, lines 61-67).

Regarding claim 15, Ayres teaches a method for configuring a router system (column 3, lines 26-30), comprising: configuring a plurality of virtual routers (column 3, lines 26-30); defining at least one resource to be shared by the plurality of virtual routers (column 10, lines 56-58); creating a router profile for each of the plurality of virtual routers (column 7, lines 12-14).

Regarding claim 16, Ayres teaches that the configuring includes: setting a plurality of attributes for each of the plurality of virtual routers (column 10, lines 30-37).

Regarding claim 18, Ayres teaches that at least one resource includes one a data resource (data queue head structure 55 of Fig. 3 corresponds to one resource includes a data resource as indicated in Fig. 3).

Regarding claim 20, Ayres teaches that at least one resource includes a common memory (20 of Fig. 2).

Regarding claim 21, Ayres teaches that the router profile includes at least one of a user identifier (column 8, lines 12-14).

Regarding claim 22, Ayres teaches that the router profile includes resource sharing priority information for each of the at least one resource (the claimed resource haring priority information is contained in the QOS customer profiles of router 20, Fig. 3).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayres (US Patent # 6,597,699) in view of Chapman et al. (US Patent # 6,628,609).

Regarding claim 10 and 19, Ayres teaches router system (110 of Fig. 7). Ayres differs from the claimed invention in that Ayres does not teach that at least one resource includes one switching fabric bandwidth and port bandwidth. However, Chapman with the same field of endeavor teaches that one resource includes one switching fabric bandwidth and port bandwidth (column 11, lines 7-15 ; column 13, lines 6-14). One of ordinary skill in the art would have been motivated to incorporate switching fabric and port bandwidth into the communication system of Ayres in order to establish logical pathways to interconnect input port with output port. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

incorporate switching fabric and port bandwidth such as the one taught by Chapman into the communication network of Ayres with the motivation being that it provides capability for the system to establish logical pathways to interconnect input port with output port.

3. Claims 23, 24, 27, 28, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayres (US Patent # 6,597,699) in view of Clark et al. (US Patent # 6,442,588).

Regarding claim 23, Ayres teaches a router system (Fig. 7), a method for controlling allocation of a group of shared resources by a plurality of virtual routers, the method comprising: receiving a request for allocation of one of the shared resources from at least one of the plurality of virtual routers (column 9, lines 29-30; column 11, lines 29-30; 112,114,116, and 118 of Fig. 7 are virtual routers of router 20). Ayres differs from the claimed invention in that Ayres does not teach determining whether the request is authentic based on the security information as well as granting the request when the request is authentic. However, Clark teaches determining whether the request is authentic based on the security information (column 6, lines 20-22); and granting the request when the request is authentic (column 6, lines 37-40). One of ordinary skill in the art would have been motivated to incorporate determining whether the request is authentic based on the security information and granting the request when the request is authentic into the communication network of Ayres in order to filter out unauthorized access by a user. Therefore, it would have been obvious to one of

ordinary skill in the art at the time the invention was made to incorporate determining whether the request is authentic based on the security information and granting the request when the request is authentic such as the one taught by Clark into the communication network of Ayres with the motivation being that it provides capability for the system to prevent unauthorized access by a user to an on line service provider network.

Regarding claim 24, Ayres teaches that the router system includes a resource-shared information based that is configured to store resource allocation information for each of the plurality of virtual routers (column 9, lines 29-30); and updating the resource-shared information base on the granting (column 7, lines 1-3; the system time stamp field 72 is used for updating since it is used for holding a time stamp value indicating when a poll of the data queue head structure 54 was last performed).

Regarding claim 27, Ayres teaches a router system (Fig.7) comprising: a plurality of virtual routers configured to share at least one resource, of the plurality of virtual routers being associated with a router profile and resource sharing priority for the virtual router (column 11, lines 29-30; 112, 114, 116 and 118 of Fig. 7 correspond to the claimed virtual routers); a rsource-shared information base configured to maintain at least one resource (column 10, lines 56-58); and a resource allocator configured to receive a request for access to the at least one resource and grant access to the at least one resource to one of the plurality of virtual routers based on the profile of the one virtual router (column 7, lines 52-63; column 8, lines 29-33; the claimed resource allocator corresponds to flow manager 54 of Fig. 3). Ayres differs from the claimed

invention in that Ayres does not teach a router profile that defines a security level. However, Clark with the same field of endeavor discloses a router profile that defines a security level (column 4, lines 30-41). One of ordinary skill in the art would have been motivated to incorporate security level into the communication system in order to prevent unauthorized access by users. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate security level such as the one taught by Clark into the communication network of Ayres with the motivation being that it provides capability for the system to prevent unauthorized access by a user to an on line service provider network.

Regarding claim 28, Ayres teaches that the resource-shared information base is further configured to: store a plurality of attributes for each of the plurality of virtual routers (column 10, lines 56-58).

Regarding claim 29, Ayres teaches that the plurality of attributes include at least two of : a virtual router identifier (the claimed virtual router identifier is inherent in the virtual router of Ayres), a bandwidth parameter for each interface with which a respective virtual router is associated (column 7, lines 61-67).

Allowable Subject Matter

4. Claims 3, 25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 273-3183. The examiner can normally be reached on M-F from 8:30am to 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (571) 272-3179. The Fax number is (571) 273-8300. Any inquiry of general nature or relating to the status of this application or proceeding should be directed to Electronic Business Center numbers 866-217-9197 and 703-305-3028.

Alexander Boakye

Patent Examiner
AB
12/31/05

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TECHNOLOGY CENTER 2600
1/4/06